

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of managing a radio transmission system affected by a source of degrade, the radio system comprising:
 - at least one transmitter receiving ~~at its input~~ a signal to be transmitted at an input of said
at least one transmitter;
 - at least one transmission channel; and
 - at least one receiver for receiving signals transmitted by said at least one transmitter,the method comprising: ~~the steps of~~
 - measuring ~~the~~ quality of service offered by the radio system; ~~and~~
 - obtaining a value indicative of ~~such a quality of signal~~; ~~wherein it further comprises the~~
~~steps of:~~
 - evaluating ~~the~~ a type of the degrade source;
 - associating a certain threshold value with each type of the degrade source; and
 - comparing the value indicative of the quality of signal with the certain threshold value
corresponding to the source of degrade ~~that is~~ present in the transmission channel.

2. (currently amended): ~~A~~The method according to claim 1, wherein ~~the step of~~
said evaluating the type of the source of degrade comprises ~~the step of evaluating the samples of~~
error autocorrelation.

3. (currently amended): ~~A~~The method according to claim 1, wherein ~~the step of~~
said evaluating the type of the source of degrade comprises ~~the step of comparing the a~~ first error
autocorrelation sample with a threshold value, and when ~~if~~ the first error autocorrelation sample
is greater than the threshold value, ~~it is deduced~~ that the transmission channel is affected by
selective fading, otherwise said transmission channel is affected by flat fading.

4. (currently amended): ~~A~~The method according to claim 1, wherein ~~the steps of said~~
measuring the quality of service offered by the radio system and ~~of said~~ obtaining a the value
indicative of ~~such a~~ the quality of the signal comprise ~~the step of performing a computation of~~
~~the~~ mean square error.

5. (currently amended): ~~A~~The method according to claim 1, wherein ~~the steps of said~~
measuring the quality of service offered by the radio system and ~~of obtaining a~~ the value
indicative of ~~such a~~ the quantity of signal comprise ~~the step of calculating a parameter inherent to~~
~~the~~ trellis of ~~the~~ codes in Trellis-coded modulations.

6. (currently amended): ~~A-The method according to claim 1, wherein ~~the steps of~~ said measuring the quality of service offered by the radio system and ~~of obtaining a~~ the value indicative of ~~such a~~ the quality of signal comprise ~~the step of~~ carrying out an estimation of ~~the a~~ number of errored symbols per second.~~

7. (currently amended): ~~A-The method according to claim 1 wherein the radio system further comprises at least one main channel to be protected and one spare channel, and wherein ~~it~~ the method further comprises ~~the additional step of~~ utilizing the spare transmission channel ~~in the instance where~~ when the value indicative of the quality of ~~the~~ signal in the main channel is greater than the corresponding threshold value.~~

8. (currently amended): ~~A-The method according to claim 1, ~~wherein it~~ further comprising ~~the additional step of~~ emitting alarms ~~in the instance where~~ when the value indicative of the quality of ~~the~~ signal is greater than the corresponding threshold value.~~

9. (new): A method of managing a radio transmission system affected by a source of degrade, the radio communication system comprising:

at least one transmitter receiving at an input a signal to be transmitted;

at least one transmission channel; and

at least one receiver for receiving signals transmitted by said at least one transmitter,

the method comprising:

measuring a quality of service offered by the radio system;

obtaining a value indicative of a quality of a signal based on said measuring;

determining a type of the degrade source present in the transmission channel;

selecting a threshold value corresponding to the determined type of the degrade

source from at least two threshold values, where each of said at least two of

threshold values corresponds to a type of the degrade source; and

comparing the value indicative of the quality of the signal with the selected

threshold value.

10. (new): The method according to claim 9, wherein said at least two threshold values are predetermined and wherein a first threshold value corresponds to selective fading and a second threshold value corresponds to flat fading.

11. (new): The method according to claim 10, wherein said determining the type of the degrade source comprises comparing a first error autocorrelation sample with a threshold value, and based on said comparison determining the type of the degrade source, wherein when the first error autocorrelation sample is greater than the threshold value, the channel is affected

by the selective fading, and when the first error autocorrelation sample is not greater than the threshold value, the channel is affected by the flat fading.

12. (new): The method according to claim 11, wherein the threshold value is selected based on the determined type of the degrade source and wherein each of the at least two threshold values is predetermined and is unique to a corresponding type of the degrade source.